

STANDARD SPECIFICATIONS

PREFABRICATED AND PREASSEMBLED COMFORT STATION

Models **2S-CON-WET-L-ADA**

Project: Cape Fear

Location: Wilmington, NC

6-1-2006

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PREFABRICATED AND PREASSEMBLED COMFORT STATION

TABLE OF CONTENTS

DIVISION 13

13010

Manufactured Buildings

SPECIAL CONSTRUCTION

CODE DATA:

UBC 2003 OR LATEST

NEC 2002 OR LATEST

UPC 1994 OR LATEST

DESIGN LOADS:

WIND: 140 MPH, EXPOSURE C

SEISMIC: ZONE 4

SECTION 13010
MANUFACTURED BUILDINGS

PART 1 GENERAL:

SUMMARY:

Work Included:

Prefabricated and Preassembled Concrete Restroom Building complete with all items hereinafter specified and shown on the drawings.

A Complete set of drawing will be supplied to the Owner for review and approval.

Samples:

Submit samples of finishes representative of proposed quality and color range, minimum 2 sets required.

One approved set of samples shall be retained by the Owner, one set returned to the manufacturer, and one set to be retained at the project site office to provide comparison of delivered materials.

Substitutions:

The manufacturer reserves the right to change construction as may be required.

Substitution of doors, hardware, skylights (if provided), toilet accessories, and electrical fixtures may be allowed if they are of equal quality. All substitutions and reasons for such shall be submitted in writing for approval by Owner, prior to installation.

DELIVERY, STORAGE, AND HANDLING:

Delivery and Handling of the prefabricated building shall be accomplished in such a manner as required to prevent damage to the components and their finishes.

WARRANTY:

Walcon, Inc. shall furnish a written warranty to the Owner, that during a period of one year from the Date of Delivery to the site of the building they will at their own expense make or cause to be made any repairs that may be necessary as a result of defects in workmanship.

PART II PRODUCTS:

MANUFACTURER:

Prefabricated and Preassembled restroom building (comfort station) is herein specified and based on Models as manufactured by Walcon, Inc.

MATERIALS: Precast Components: All concrete used in the precast walls, roof, and floor shall be minimum compressive strength of 5000 psi and shall conform with the requirements of the ACI standard 318-83. All fine and course aggregate shall conform to ASTM Spec. C-33. Cement shall be gray Portland cement type 1 and shall conform to ASTM Spec. C-150. The water used in the mix shall be clean and non-detrimental to the mix. The water-cement ratio shall not exceed 5 gal.per bag of cement. A concrete mix review must be provided by an independent testing laboratory certified by the structural engineer.

FLOOR ASSEMBLY: A minimum 10" thick concrete floor shall be provided with a minimum compressive strength of 5000psi. All wall assemblies are to be set into the floor assembly and tied into the floor with rebar so the floor and wall structure are integrated and form one complete structural assembly. The floor drains shall be formed into the floor assembly and become a part of the integrated floor assembly.

Reinforcement: All reinforcing steel bars shall conform to ASTM 615 Grade 60 for deformed and plain billet -steel bars for concrete reinforcement ($F_y=60$ Ksi). Wire mesh and flat sheets used for reinforcing shall conform to ASTM 185 specifications for steel welded wire fabric, plain for concrete reinforcement.

Anchors, clips and fasteners: Conform to ASTM A325.

Color Pigment: Concrete color pigment if specified shall be permanent to sunlight and weather, line proof and uniform as recommended by the Portland cement association in accordance with ASTM spec. C-494.

Concrete Mix: Chemicals used in the concrete mix shall conform to an ASTM spec. No.C-260 for air entrainment and C-494 for super plasticizer.

Doors: Exterior Doors shall be 1 3/4 inch thick pre-hung metal with a matching metal frame attached to the building in a permanent way. Curries model no. 707 is approved.

Each exterior door shall have the following hardware:

Stainless steel 10" x 34" kickplate (inside only)

Yale cylinder 5400 Series Lever lockset

Spring hinges #1250-4 1/2" x 26D.

Door sweeps

Note: All door hardware and the position of the hardware on the door shall meet the requirements of the Americans with Disabilities Act (ADA).

Chase Door: Plumbing Chase Door shall be 1 3/4 inch thick pre-hung metal door with a matching frame attached to the building in a permanent way. The door hardware shall be as follows:

Yale cylinder 3500 Series Cylindrical Deadbolt keyed alike

Stainless steel 3/4" x 6" door pull

Spring hinges #1250-4 1/2" x 4 1/2" x 26D.

Door Sweep

Signage: Molded plastic signs with etched surfaces shall have the international handicapped symbol and shall have raised Braille characters. Signage shall comply with ADA requirements.

Toilet Accessories: Bradley 812-2 grab bars with safety grip finish, concealed mounting. The grab bars shall be mounted 33 inches above the finished floor. Bradley 812-2 grab bars with safety grip finish, concealed mounting. The grab bars shall be mounted 33 inches above the finished floor. The paper towel dispenser/trash receptacle shall be Bradley 235-11. The toilet paper holder shall be a Royce Rolls model #TP2. The Stainless Steel Mirror shall be a Bradley 7481 18X24. All accessories are to be mounted per ADA requirements.

Plumbing: Lavatories shall have a 1/8" - 3/8" copper or plastic supply to the fixtures concealed in the plumbing chase. All fixtures shall have a shut-off valve in the plumbing chase, waste and vent lines shall be connected to the fixtures, with traps and vents where necessary for connection by general contractor to waste disposal lines. Waste piping shall be schedule 40 PVC

Lavatories shall be WalCon Model CB-1495-1, stainless steel, for severe service. Wash fountain shall have a Bradley metering valve.

Toilets shall be Kohler Model No. K-4329 Vitreous China, low consumption reverse trap, siphon action with concealed flush valve or equal. The toilet is to be mounted 19" off of the finish floor per ADA accessibility requirements.

Showers shall be Acorn 450 Series Apex Type 5 surface mounted showers to be mounted on the outside rear section of the building.

Electrical: All Electrical Items shall be pre-wired as shown in conduit on drawings. Hardware shall be as follows:

- Fail Safe Model FPS-140-120-CWB-GLR fluorescent lighting fixture 40 watt 120 V for high abuse areas interior light.
- Siemens 100 amp panel with 12 breakers.
- Exterior lighting – Fail Safe HPECHE 35W 120 exterior light
- 1 1/2 inch gray PVC schedule 40 below slab (power into disconnect).
- 1/2 inch flexible conduit with 12 Gauge wire.
- Intermatic electronic 7-day time switches
- Rheem Short Model Hot water Heater

DESIGN AND FABRICATION:

The restroom building design and fabrication shall be adequate to resist wind loads in accordance with governing building codes and the stresses and shocks common to buildings. Design calculations and shop drawings shall clearly state design wind loads (PSF) and all criteria, safety factors, etc. used to arrive at a design wind load.

The forms for the precast components shall be constructed such that the finished components will have sharp definition, dimensional accuracy, and uniformity of shape and texture. Precast components shall be prefabricated to the sizes and shapes indicated on the project plans. No unfinished edges shall be exposed to view. The finished components shall be straight and square. Waxed, cracked, broken, spalled, stained, or otherwise defective units shall not be used. Components with imperfections in exposed surfaces shall not be used.

Reinforcing assemblies shall be prefabricated into single complete units with a minimum of 3/4 inch clearance from the edges and surfaces of the precast unit.

Place and secure in the forms all necessary anchors, clips, inserts, lifting devices, stud bolts, ties and any other device that is required for handling and installing the precast components and for the attachment of subsequent items.

Precast concrete components shall be cured in forms for a minimum of 24 hours, or until the concrete reaches 75 percent of design strength. All exposed surfaces must be covered to control the loss of moisture and temperature. After the precast component is removed from the form it must be covered or be moisture cured until the results of a 7 day compression test is available.

All precast wall panels shall be welded together and be attached to the floor in such a way as to form a continuous unit. Wall and floor reinforcing should be permanently attached to each other. The welding procedure has to be submitted and approved by a professional engineer. All welding shall be done by welders having current valid certifications and having current experience in this type of welding. All construction shall be per American Welding Society Codes and Recommendations. All exposed steel plate assemblies both inside and out shall be painted over the shop coat.

The finished floor shall be level along all walls. No area of the floor shall allow wastewater to accumulate.

FINISHES:

Exterior Walls: The exterior concrete walls of the building shall have a Concrete Stamped Barnwood Formliner finish. Two coats of sealer as manufactured by Sherwin Williams shall be applied at the factory. Owner will choose the color for the exterior concrete wall.

Roof: Concrete Gable. Owner will choose the color for the roof.

Exterior Doors and Frames: Primed and shall have 2 coats of enamel paint applied. Color to be selected and approved by Owner.

Caulking Compound: Before all joints of the building are caulked, a rolled polyurethane foam rope shall be placed in the seams for insulation purposes. All joints will then be caulked with a non-sag, non-staining polyurethane caulking compound meeting ASTM C-920-79. Sika-flex is approved.

Interior Walls, Ceiling, and Floor: The floor slab should be steel troweled then have a broom finish. Followed by an application of concrete floor sealer, Sherwin Williams two part epoxy product No. B62T104 and B60v70. Interior walls, ceiling and floor of the building shall be sealed with a two part epoxy, "Tile Clad" manufactured by Sherwin Williams. Owner will choose the colors for the walls and floor.

PART III EXECUTION:

INSTALLATION: Safety data information must be supplied on all items used in the production and furnishing of this building and foundation. All technical specifications are to be delivered to the general contractor or contracting officer upon delivery of the building and foundation to the job site.

